

## **REMARKS**

Claims 1-2 are pending in the present application. Claim 3 was previously withdrawn in response to a restriction requirement,

In the present Office Action, the Examiner rejected claims 1 and 2 as being anticipated by Hoeg U.S. Pat. No. 6,173,702. Hoeg was asserted by the Examiner as a reference under 35 U.S.C. §102(e).

In the present Office Action, the Examiner rejected claims 1 and 2 as being anticipated by Stong et. al., U.S. Pat. No. 6,562,480. Stong was asserted by the Examiner as a reference under 35 U.S.C. §102(e).

Applicant hereby responds to the Examiner's objections and rejections as described below.

### **A. Rejection of Claim 1 as Anticipated by Hoeg under 35 U.S.C. §102(e)**

In the present Office Action, the Examiner rejected claim 1 under 35 U.S.C. §102(e) as being unpatentable over Hoeg, U.S. Pat. No. 6,173,702. Hoeg is directed towards a hot-corrosion resistant material. The corrosion resistant material is recited as having at most 38% chromium. The specification of Hoeg expressly states that "If the content of chromium of the material becomes less than 38%, the desired resistance to hot corrosion is not obtained." Hoeg, Col. 3, Lns. 52-54.

Claim 1 has been amended to recite the inclusion of chromium in the coating at a level less than 38%, and accordingly, Applicant believes that Claim 1 as amended is not anticipated by Hoeg. Furthermore, as Hoeg does not teach the catalytic purpose of the coating,

Applicant does not believe that Hoeg suggests the use of the lower chromium levels to obtain adequate catalytic purposes, and that accordingly the present invention is not obvious in view of Hoeg.

Accordingly, Applicant believes that Hoeg neither anticipates claim 1 as amended, nor is claim 1 obvious in view of Hoeg, and accordingly, claim 1 as amended is believed to be in allowable condition.

**B. Rejection of Claim 2 as Anticipated by Hoeg under 35 U.S.C. §102(e)**

In the present Office Action, the Examiner rejected claim 1 under 35 U.S.C. §102(e) as being unpatentable over Hoeg., U.S. Pat. No. 6,173,702. Hoeg is directed towards a hot-corrosion resistant material. The corrosion resistant material is recited as having at least 38% chromium in order to provide the desired corrosion protective properties.

Claim 2 of the present patent application has been amended to distinguish the Hoeg reference. As amended, the upper limit of chromium in the coating of the present invention has been reduced to 37%, and accordingly claim 2 as amended is not anticipated by Hoeg.

Further, Hoeg teaches the use of high levels of chromium to achieve corrosion resistance. The present application is directed towards the creating of a coating having catalytic properties, and accordingly, the high levels of chromium desirable in Hoeg teach away from the coating of the present invention.

Accordingly, Applicant believes that Hoeg neither anticipates claim 2 as amended, nor is claim 2 obvious in view of Hoeg, and accordingly, claim 2 as amended is believed to be in allowable condition.

**C. Rejection of Claims 1 and 2 as Anticipated by Stong under 35 U.S.C. §102(e)**

In the present Office Action, the Examiner rejected claim 1 under 35 U.S.C. §102(e) as being unpatentable over Stong. et. al., U.S. Pat. No. 6,562,480 (hereafter “Stong”). Stong is directed towards a wear resistant ceramic coating that uses a nickel-chromium alloy as a binder for the ceramic material. The resultant coating is thus a homogenous mixture containing substantial amounts of ceramic material, especially when considered by volume. Stong teaches applying the resultant coating to the walls of the cylinder liner, i.e., that portion of the cylinder on which the sealing rings slide. It is relevant to note that when the piston is at its topmost position, the piston obscures the surface of the cylinder lining from the chamber in which combustion occurs. Thus, only when the piston is at its lowest position relative to the closure of the combustion chamber is the coated surface exposed.

Claims 1 and 2 require the coating to cover a significant portion of the combustion surfaces, to wit:

. . . such that when the combustion face is at the position at which the combustion face is at a closest point to the closure, the coating covers an area of the combustion surfaces at least as large as approximately 10% of the area of the combustion face . . .

Accordingly, Stong does not teach the application of the claimed coating to combustion surfaces, but rather to a sliding surface which is obscured when the piston is at its topmost travel position. Accordingly, Stong does not teach coating at least 10% of the combustion surfaces with the coating.

Furthermore, the inclusion of ceramics as required by Stong decreases the interaction between combustion gases and the catalytic elements of the coating, and accordingly teaches away from the present invention.

Accordingly, Applicant believes that Hoeg neither anticipates claims 1 or 2, nor are claims 1 or 2 obvious in view of Hoeg, and accordingly, claims 1 and 2 are believed to be in allowable condition.

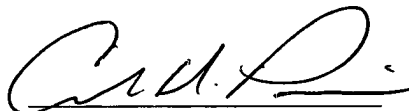
**D. Fees**

Inasmuch as the number of independent claims remains at 2 independent claims, and the total number of claims remains at 2 claims as well, no additional claim fees are believed due as a result of this amendment.

**Conclusion**

Applicants respectfully request the issuance of a Notice Of Allowance for claims 1 and 2 at the earliest possible time. Applicants further respectfully request the courtesy of a telephone call should there be any outstanding issues related to the issuance of a Notice of Allowance in this matter.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'C.H. Pierce', written over a horizontal line.

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